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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,785	02/23/2004	Nobushige Korenaga	00862.023468	5519

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EXAMINER

SY, MARIANO ONG

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/782,785

Applicant(s)

KORENAGA, NOBUSHIGE

Examiner

Mariano Sy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 02232004, 04282004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Drawings

2. Figure 18A-18C should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 3 recites the limitation "the sizes" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3, 5, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yagishita (JP 7-267192-A) in view of Shtarkman et al. (US 6,196,529).

Re-claims 1, 3, 5, and 6 Yagishita disclosed, as shown in fig. 1-4, an anti-vibration apparatus comprising: a first magnet unit arranged on a support target and including a first electromagnet 3; and a second magnet unit including a pair of second electromagnets 4, said pair of second electromagnets being arranged to interpose said first electromagnet in noncontact with said first electromagnet such that same magnetic poles of said first and second electromagnet oppose each other, wherein sizes of said first and second magnet units are set such that no force acts between said first and second magnet units in a relative position range between said first and second magnet units in a direction perpendicular to a direction in which said first magnet unit supports the support target; wherein said second magnet unit includes a yoke 6 for said pair of second electromagnets; wherein said second magnet unit includes a changing unit 11

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which changes area through which said second pair of electromagnets oppose said first electromagnet.

However Yagishita failed to disclose first and second magnet units are permanent magnets.

Shtarkman et al. teaches a vibration control damper the use of electromagnet 94 that could be replaced with permanent magnets (see col. 5, lines 45-50).

It would have been obvious to one of ordinary skill in the art to modify the magnet units of Yagishita with permanent magnets, as taught by Shtarkman et al., is a matter of design choice or an alternate equivalent that have the same intended function of vibration damping.

Re-claim 2 Yagishita was silent to disclose wherein the size of said first electromagnet is smaller than said pair of second permanent magnets in a direction perpendicular to the support direction and the opposing direction.

It would have been obvious to one of ordinary skill in the art to have made the size of said first electromagnet is smaller than said pair of second electromagnets in a direction perpendicular to the support direction and the opposing direction into the apparatus of Yagishita depending upon the size and weight of the object on the support target.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yagishita in view of Shtarkman et al. as applied to claim 1 above, and further in view of Haga et al. (US 5,876,012).

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Re-claim 4 Yagishita as modified was silent to disclose an electromagnetic actuator for generating a force which acts on the support target.

Haga et al. teaches the use of electromagnetic actuator for generating a force that acts on the support target (see abstract and col. 7, lines 27-32).

It would have been obvious to one of ordinary skill in the art to have utilize the electromagnetic actuator into the apparatus of Yagishita as modified, in view of the teaching of Haga et al., in order to effectively control vibration on the support target.

8. Claims 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yagishita in view of Shtarkman et al. as applied to claim 1 above, and further in view of Tanaka (US 6,496,248).

Re-claims 7-12 Yagishita as modified failed to disclose a device manufacturing apparatus and method comprising an anti-vibration apparatus; an exposure apparatus for exposing a substrate to a pattern wherein at least one of a stage for a reticle, a stage for a substrate to be exposed, and a system which projects the pattern is arranged on said support target; wherein said exposure apparatus is arranged in a vacuum chamber.

Tanaka teaches a device manufacturing apparatus and method comprising an anti-vibration apparatus; an exposure apparatus for exposing a substrate to a pattern wherein at least one of a stage for a reticle, a stage for a substrate to be exposed, and a system which projects the pattern is arranged on said support target; wherein said exposure apparatus is arranged in a vacuum chamber.

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It would have been obvious to one of ordinary skill in the art to have utilized the anti-vibration apparatus of Yagishita into the device manufacturing apparatus and method with an exposure apparatus for exposing a substrate to a pattern wherein at least one of a stage for a reticle, a stage for a substrate to be exposed, and a system which projects the pattern is arranged on said support target; wherein said exposure apparatus is arranged in a vacuum chamber, as taught by Tanaka, in order to effectively minimize vibration that will affect the device manufacturing apparatus.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Trumper	(US 5,196,745)
Chu et al.	(US 5,159,219)
Trumper	(US 5,294,854)
Kurita et al.	(US 5,487,533)
Hanzawa	(US 5,986,743)
Iwasaki et al.	(US 6,621,556)
Yagishita	JP 4-27696-A)

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mariano Sy whose telephone number is 703-308-3427. The examiner can normally be reached on Mon.-Fri. from 9:00 A.M. to 3:00 P.M.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bucci, can be reached on 703-308-3668. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 M. Sy

February 1, 2005